PATENT ASSIGNMENT COVER SHEET

Stylesheet Version v1.2

Electronic Version v1.1 EPAS ID: PAT5524681

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
SEQUENCE:	1

CONVEYING PARTY DATA

Name	Execution Date
GEORGE HARTMAN	08/02/2017
OSVALDO FLORES	08/23/2017
KLAUS KLUMPP	08/22/2017
MAN IU LAM	08/22/2017

RECEIVING PARTY DATA

Name:	NOVIRA THERAPEUTICS, INC.
Street Address:	3805 OLD EASTON ROAD
City:	DOYLESTOWN
State/Country:	PENNSYLVANIA
Postal Code:	18902

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15488368

CORRESPONDENCE DATA

Fax Number: (857)300-4001

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 857-300-4003

bostonpatent@lathropgage.com,dvincent@lathropgage.com,dpstein@lathropgage.com Email:

Correspondent Name: BRIAN C. TRINQUE LATHROP GAGE LLP Address Line 1: Address Line 2: 28 STATE STREET

Address Line 4: BOSTON, MASSACHUSETTS 02109

Total Attackments . O	
DATE SIGNED:	05/15/2019
SIGNATURE:	/BRIAN C. TRINQUE/
NAME OF SUBMITTER:	BRIAN C. TRINQUE, PH.D., ESQ.
ATTORNEY DOCKET NUMBER:	590283: NTT-029

Total Attachments: 8

PATENT REEL: 049186 FRAME: 0386 source=590283_NTT-029_FULLY-EXECUTED_DECS_ASSIGNMENT_11-13-17#page1.tif
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PATENT REEL: 049186 FRAME: 0387

Attorney Docket No.: TIP0368USNP

COMBINED DECLARATION AND ASSIGNMENT

Title of Invention: COMBINATIONS AND M	ETHODS COMPRISING A CAPSID ASSEMBLY INHIBITOR
This declaration and assignment is directed to: Or	The attached or filed herewith application of (list of named inventors)
	The United States application or PCT international application number 15/488,368 filed on April 14, 2017.
Declaration	
As the below named inventor, I hereby det	clare that:
The above-identified application ("Application)	ation") was made or authorized by me.
I believe that I am the original inventor or	an original inventor of a claimed invention or discovery in the Application.
I have reviewed and understood the cont information which is material to patentability as de Application in the United States of America.	ents of the Application, including the claims, and I acknowledge the duty to disclose fined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of this
I hereby acknowledge that any willful fal imprisonment of not more than five (5) years, or bo	se statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or oth for filings of this Application in the United States of America.
Assignment	
	(Name and Address)
A corporation (he	of the state or country of Novira Therapeutics, Inc. ereinafter designated as the "Assignee").
☐ I hereby acknowledge that I have assigne which is hereby conformed for recordation in the U	ed the above-identified invention by previous assignment (attached hereto) to Assignee JS Patent Office and I confirm I have and do assign and transfer:
or	·•
and transferred to Assignee:	sufficiency of which is acknowledged. I hereby assign and transfer and/or have assigned
right to claim priority to the Application, all inventions or discoveries and all rights in such A thereof, and to all Letters Patent that may be grant to the control of t	the Application, including all priority rights for other countries arising therefrom and the tions or discoveries therein disclosed, and any and all Letters Patent of the United States, s, which may be granted for such inventions or discoveries, or any of them, all such pplication including any and all provisionals, substitutions, divisions, and continuations anted for said inventions and discoveries, and in and to all extensions, supplementary and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment h Letters Patent may be granted, as fully and entirely as the same would have been held not been made.
Office, any other patent offices, and under the Pa	with the Application in the United States Patent and Trademark Office, European Patent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof and any patent term extensions or supplementary protection certificates of any such ments in connection with such applications as the Assignee may deem necessary of
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PATENT REEL: 049186 FRAME: 0388

Attorney Docket No.:	
STRUCKING PROPERTY OF	

I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.

I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.

I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.

I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

LEGAL NAME OF INVENTOR: George Hartman

Signature

Oate Olygust 2, 2017

Attorney Docket No.: TIP0368USNP

COMBINED DECLARATION AND ASSIGNMENT

Title of Invention: COMBINATIO	NS AND M	METHODS COMPRISING A CAPSID ASSEMBLY INHIBITOR
This declaration and assignment is direct	cted to:	The attached or filed herewith application of (list of named inventors),
	or	••
	\boxtimes	The United States application or PCT international application number 15/488,368 filed on April 14, 2017.
Declaration		
As the below named inventor,	I hereby de	clare that:
The above-identified application	on ("Applic	ration") was made or authorized by me.
I believe that I am the original	inventor or	an original inventor of a claimed invention or discovery in the Application.
I have reviewed and understo information which is material to patents Application in the United States of Am	ability as de	tents of the Application, including the claims, and I acknowledge the duty to disclose fined in Title 37, the United States Code of Federal Regulations, §1.56 for filings of this
I hereby acknowledge that an imprisonment of not more than five (5)	y willful fa	lse statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or oth for filings of this Application in the United States of America.
Assignment		
		(Name and Address)
A	corporation (he	of the state or country of Novira Therapeutics, Inc. ereinafter designated as the "Assignee"),
☐ I hereby acknowledge that I have been supported in I have been suppo	nave assigne tion in the U	ed the above-identified invention by previous assignment (attached hereto) to Assignee US Patent Office and I confirm I have and do assign and transfer:
or		
☐ For good and valuable consider and transferred to Assignee:	eration, the	sufficiency of which is acknowledged, I hereby assign and transfer and/or have assigned
right to claim priority to the Application European Patent Office and of all oth inventions or discoveries and all rights thereof, and to all Letters Patent that protection certificates, reexaminations	n, all inventier countries in such Apmay be grand, renewals, and which such	the Application, including all priority rights for other countries arising therefrom and the tions or discoveries therein disclosed, and any and all Letters Patent of the United States, is, which may be granted for such inventions or discoveries, or any of them, all such application including any and all provisionals, substitutions, divisions, and continuations anted for said inventions and discoveries, and in and to all extensions, supplementary and reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment h Letters Patent may be granted, as fully and entirely as the same would have been held not been made.
Office, any other patent offices, and u	nder the Pa	with the Application in the United States Patent and Trademark Office, European Patent tent Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, and any patent term extensions or supplementary protection certificates of any such ments in connection with such applications as the Assignee may deem necessary or
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PATENT

REEL: 049186 FRAME: 0390

Att	torney Docket No.:
I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reiss any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term ext protection certificates of any such applications and to cooperate with the Assignee in every way possible in obt forward with such litigation or proceeding.	ice, any other patent office, ue applications thereof, or ensions or supplementary
I shall execute all papers and documents and perform any act which may be necessary in connection we the International Convention for Protection of Industrial Property or similar agreements.	ith claims or provisions of
I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee	e grant of Letters Patent to ssignee may desire to have

such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute,

I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

LEGAL NAME OF INVENTOR: Osvaldo Flores

Signature

Date

any agreement in conflict herewith.

Attorney Docket No.: <u>TIP0368USNP</u>

COMB	INED	DECLARATION AND ASSIGNMENT
		ETHODS COMPRISING A CAPSID ASSEMBLY INHIBITOR
This declaration and assignment is directed t	o: 	The attached or filed herewith application of (list of named inventors),
		The United States application or PCT international application number <u>15/488,368</u> filed on <u>April 14, 2017</u> .
Declaration		
As the below named inventor, I her	eby decl	are that:
The above-identified application (".	Applicat	tion") was made or authorized by me.
I believe that I am the original inven	ntor or a	an original inventor of a claimed invention or discovery in the Application.
	y as defi	nts of the Application, including the claims, and I acknowledge the duty to disclose ned in Title 37, the United States Code of Federal Regulations, §1.56 for filings of this
		e statement made in this declaration is punishable under 18 U.S.C. § 1001 by fine or h for filings of this Application in the United States of America.
Assignment		
A corpo		(Name and Address) f the state or country of Novira Therapeutics, Inc. einafter designated as the "Assignee"),
· · · · · · · · · · · · · · · · · · ·	_	the above-identified invention by previous assignment (attached hereto) to Assignee Patent Office and I confirm I have and do assign and transfer:
or		
For good and valuable consideration and transferred to Assignee:	n, the su	fficiency of which is acknowledged, I hereby assign and transfer and/or have assigned
right to claim priority to the Application, all European Patent Office and of all other co inventions or discoveries and all rights in su thereof, and to all Letters Patent that may protection certificates, reexaminations, renev	inventio untries, ich Appi be grant wals, and h such L	e Application, including all priority rights for other countries arising therefrom and the ons or discoveries therein disclosed, and any and all Letters Patent of the United States, which may be granted for such inventions or discoveries, or any of them, all such lication including any and all provisionals, substitutions, divisions, and continuations ted for said inventions and discoveries, and in and to all extensions, supplementary d reissues thereof, to be held and enjoyed by Assignee for its own use and enjoyment Letters Patent may be granted, as fully and entirely as the same would have been held been made.
Office, any other patent offices, and under tany reexamination of any of such applicat	he Pater ions, an	th the Application in the United States Patent and Trademark Office, European Patent at Cooperation Treaty, and any continuing, divisional, or reissue applications thereof, and any patent term extensions or supplementary protection certificates of any such ents in connection with such applications as the Assignee may deem necessary or

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PATENT

REEL: 049186 FRAME: 0392

	Attorney Docket No.:			
I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.				
I shall execute all papers and documents and perform any act which may be necessary in connection with claims or provisions of the International Convention for Protection of Industrial Property or similar agreements.				
I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.				
I hereby (i) authorize and request the Commissioner of Patents to issue any and all Letters Patent of the United States resulting from the Application or any divisional, continuation, or reissue applications thereof, and any reexamination of any of such applications, to Assignee, and (ii) covenant that I have full right to convey the interest herein assigned, and that I have not executed, and will not execute, any agreement in conflict herewith.				
I hereby grant the attorney of record the power to insert on this assi desirable in order to obtain legal recordation of this document.	ignment any further identification which may be necessary or			
LEGAL NAME OF INVENTOR: Klaus Klumpp				
Klaus Klumpp	08-22-2017			
Signature	Date			

Attorney Docket No.: TIP0368USNP

COMBINED DECLARATION AND ASSIGNMENT

Title of Invention: COMBINATIONS This declaration and assignment is directed		RISING A CAPSID ASSE	MBLY INHIBITOR	
The about and assignment is enough		filed herewith application	of (list of named inventors),
	or seems to the			
		es application or PCT inter 3,368 filed on <u>April 14,</u>		
Declaration				
As the below named inventor, I he	ereby declare that:			
. The above-identified application (("Application") was made o			
I believe that I am the original inv	entor or an original invento	or of a claimed invention o	r discovery in the Applicat	ion.
I have reviewed and understood information which is material to patentability Application in the United States of America	ity as defined in Title 37, the			
I hereby acknowledge that any w imprisonment of not more than five (5) year				1001 by fine or
Assignment				
100 mg 1 m	(Name and	•		
A corp	poration of the state or coun hereinafter designated)		3, Inc.	
☐ I hereby acknowledge that I have which is hereby conformed for recordation				to) to Assignee
or				
For good and valuable considerationand transferred to Assignee:	on, the sufficiency of which	n is acknowledged, I hereb	y assign and transfer and/o	r have assigned
my entire right, title, and interest in, to, and right to claim priority to the Application, all European Patent Office and of all other conventions or discoveries and all rights in thereof, and to all Letters Patent that may protection certificates, reexaminations, rento the full end of the term or terms for what and enjoyed by me had this assignment and	Il inventions or discoveries countries, which may be grauch Application including be granted for said inventewals, and reissues thereofich such Letters Patent may	therein disclosed, and any ranted for such inventions any and all provisionals, ations and discoveries, and to be held and enjoyed b	and all Letters Patent of the s or discoveries, or any of substitutions, divisions, an d in and to all extensions, y Assignee for its own use	e United States, them, all such d continuations supplementary and enjoyment
I shall execute all papers necessary in conformal Office, any other patent offices, and under any reexamination of any of such applications and also to execute separate expedient.	the Patent Cooperation Trations, and any patent terr	eaty, and any continuing, m extensions or supplement	divisional, or reissue appli entary protection certificat	cations thereof, tes of any such

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REEL: 049186 FRAME: 0394

Attorney Docket No.:	
T. A. B. w. o. was all	
I shall execute all papers necessary in connection with any litigation or any other judicial proceeding in the United States or other	

country, or any administrative proceeding in the United States Patent and Trademark Office, European Patent Office, any other patent office, or under the Patent Cooperation Treaty concerning the Application(s) or any continuation, divisional, or reissue applications thereof, or any reexamination of any such applications, or any Letters Patent issued therefrom or any patent term extensions or supplementary protection certificates of any such applications and to cooperate with the Assignee in every way possible in obtaining evidence and going forward with such litigation or proceeding.

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I shall do all other acts which, in the opinion of Assignee, may be necessary or desirable to secure the grant of Letters Patent to Assignee or its nominees, in the United States, by the European Patent Office and in all other countries where Assignee may desire to have such inventions or discoveries, or any of them, patented, with specifications and claims in such form as shall be approved by Assignee and to vest and confirm in Assignee or its nominees the full and complete legal and equitable title to all such Letters Patent.

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I hereby grant the attorney of record the power to insert on this assignment any further identification which may be necessary or desirable in order to obtain legal recordation of this document.

a angana anak a lang ana angang anak angang angan angan angan anak gagan anak at anak a lang angan a

LEGAL NAME OF INVENTOR: Man Iu Lam

Signature